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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,909	08/06/2003	Albert Pedoeem	15772.0009	7329
23517	7590	02/09/2006		
SWIDLER BERLIN LLP 3000 K STREET, NW BOX 1P WASHINGTON, DC. 20007			EXAMINER MCKINNON, TERRELL L	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,909

Applicant(s)

PEDOEEM ET AL.

Examiner

Terrell L. Mckinnon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9, 11-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7-9, 11-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/5/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 7-9, 11-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng (U.S. 6,046,908) in view of Kruger et al. (U.S. 6,788,540).

Feng discloses a heat radiating structure comprising:

- a housing air flow perforations over more than half of at least one surface;
- a printed circuit board including at least one component;
- a thermal plate (51) and associated parts coupled between the at least one surface of the housing and the printed circuit board (40), the thermal plate being in thermally conductive contact with the at least one component and the housing.

Wu's invention discloses all of the claimed limitations from above except for at least one component on a first side of the printed circuit board and at least one optical component on a second side of the printed circuit boards; the housing comprises mating halves, each mating half including a dimpled mating surface and a rigid mating surface, each dimpled mating surface engaging the opposing rigid mating surface wherein the

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dimpled mating surface comprises at least one chamfer and at least one dimpled member for engaging the rigid surface; a heat sink in thermal contact with the optical component and the housing, the heat sink conducting heat from the optical component to the housing; the optical component includes a metal ferrule, further comprising an optical transceiver having a grounded metal ferrule electrically coupled to the optical component; and a metal shroud coupled to the housing for surrounding the optical connector; and the metal shroud comprises dimples for electrically coupling the connector to the housing.

3. However, Kruger teaches the use of printed circuit board (40) including at least one optical component and further comprising a heat sink in thermal contact with the optical component and the housing, the heat sink conducting heat from the optical component to the housing; the optical component includes a metal ferrule, further comprising an optical transceiver having a grounded metal ferrule electrically coupled to the optical component; and a metal shroud coupled to the housing for surrounding the optical connector; and the metal shroud comprises dimples for electrically coupling the connector to the housing.

Given the teachings of Kruger, it would have been obvious to one of ordinary skill in the art at the time of the invention to furthermore modify the radiating structure of Feng with at least one component on a first side of the printed circuit board and at least one optical component on a second side of the printed circuit boards; the housing comprises mating halves, each mating half including a dimpled mating surface and a rigid mating surface, each dimpled mating surface engaging the opposing rigid mating

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surface wherein the dimpled mating surface comprises at least one chamfer and at least one dimpled member for engaging the rigid surface; the optical component comprising a heat sink in thermal contact with the optical component and the housing, the heat sink conducting heat from the optical component to the housing; the optical component includes a metal ferrule, further comprising an optical transceiver having a grounded metal ferrule electrically coupled to the optical component; and a metal shroud coupled to the housing for surrounding the optical connector; and the metal shroud comprises dimples for electrically coupling the connector to the housing.

Doing so would provide a means of controlling the temperature of electrical heat generating devices.

4. Claims 2, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng (U.S. 6,046,908) in view of Kruger et al. (U.S. 6,788,540) as applied to claims above, and further in view of Currie et al. (U.S. 4,504,156).

Feng's invention, as modified by Kruger, discloses all of the claimed limitations from above except for at least one thermally conductive and complaint pad coupled between the thermal plate and the at least one component.

5. However, Currie teaches at least one thermally conductive and complaint pad (32) coupled between the thermal plate (20) and the at least one component; the thermal plate is aluminum and is manufactured by at least one of stamping and die casting.

Given the teachings of Currie, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the radiating structure of Feng with least

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one thermally conductive and complaint pad coupled between the thermal plate and the at least one component.

Doing so would provide enhance heat dissipation and provide a reliable secure connection between the two matting objects.

Allowable Subject Matter

6. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references cited on the USPTO 892 discloses related limitations of the applicant's claimed and disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L. Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Blau can be reached on 571-272-4406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrell L McKinnon
Primary Examiner
Art Unit 3753
February 6, 2006